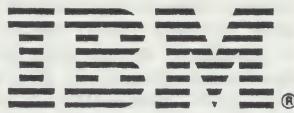


# Programming Announcement



IBM United States

March 24, 1992

## Cooperative Software: IBI Products – Revised Information and Availability

The products in this announcement are available as a part of the IBM Cooperative Software Program. Product information has been provided by the program supplier, Information Builders, Inc. (IBI), a member of the IBM International Alliance for the Information Warehouse™ framework. IBI is solely responsible for the product information contained in this announcement.

This announcement describes new features available in Release 2 of selected products from the Enterprise Data Access/SQL<sup>1</sup> (EDA/SQL<sup>1</sup>) product family for MVS and VM announced on September 11, 1991. In addition, changes in availability dates are announced along with a product withdrawal and replacement.

For additional information on the products of Information Builders, Inc., refer to Programming Announcement 291-498, dated September 11, 1991. For additional information on the Information Warehouse framework, refer to Programming Announcement 291-471, dated September 11, 1991.

**Withdrawal from Marketing:** The following products are withdrawn, effective immediately:

5758-IPL **EDA/SQL Remote Subserver for HP<sup>2</sup> MPE<sup>2</sup>**  
5758-IQZ **API/SQL<sup>1</sup> Client Environment for HP MPE**

**Planned Availability Dates:** Refer to the Description section of the customer announcement.

<sup>TM</sup> Trademark of International Business Machines Corporation.

<sup>1</sup> Trademark of Information Builders, Inc.

<sup>2</sup> Trademark or registered trademark of Hewlett-Packard, Inc.

### Description

#### Program Numbers and Names

5758-IPB	<b>EDA/SQL Server Release 2</b> for MVS/XA™ and MVS/ESA™
5758-IPF	<b>EDA/SQL Server Release 2</b> for MVS/ESA Exploitation
5758-IES	<b>EDA/Smartmode<sup>1</sup> Option</b> for MVS/XA and MVS/ESA
5758-IRV	<b>API/SQL<sup>1</sup> Client Environment</b> Release 2 for MVS/XA and MVS/ESA
5758-IPD	<b>EDA/SQL Server Release 2</b> for VM/SP and VM/ESA™
5758-IET	<b>EDA/Smartmode Option</b> for VM/SP and VM/ESA
5758-IRX	<b>API/SQL Client Environment</b> Release 2 for VM/ESA

5758-IEU	<b>EDA/SQL Remote Subserver Release 1.1</b> for HP-UX <sup>2</sup>
5758-IEV	<b>API/SQL Client Environment</b> Release 1.1 for HP-UX
5758-ITF	<b>EDA/Dynamic Extender<sup>1</sup> Release 2</b> for DB2®
5758-ITG	<b>EDA/Dynamic Extender Release 2</b> for SQL/DS™
5758-IPG	<b>EDA/SQL Server Extension Release 1</b> for VSE/ESA™

<sup>TM</sup> Trademark of International Business Machines Corporation.

<sup>1</sup> Trademark of Information Builders, Inc.

<sup>2</sup> Trademark or registered trademark of Hewlett-Packard, Inc.

<sup>®</sup> Registered trademark of International Business Machines Corporation.

#### Release 2 Availability Information

The first customer shipment date for the EDA/SQL Server Release 2 for MVS, the API/SQL Client Environment Release 2 for MVS, and the EDA/Dynamic Extender Release 2 for DB2 is June 26, 1992.

The data drivers for MVS announced on September 11, 1991, will work with both Release 1 or Release 2 of the EDA/SQL Server. All drivers are listed and described in Programming Announcement 291-498, dated September 11, 1991.

**Changes in Previously Announced Availability Dates:** The first customer shipment date for the EDA/SQL Server for VM, the API/SQL Client Environment for VM, and the EDA/Dynamic Extender for SQL/DS is June 26, 1992. At that time these products will become available as EDA/SQL Server Release 2 for VM, API/SQL Client Environment Release 2 for VM, and EDA/Dynamic Extender Release 2 for SQL/DS. The previously announced availability date was March 27, 1992.

The first customer shipment date for the EDA/SQL Server Extension for VSE/ESA (5758-IPG) is August 28, 1992, at which time the product will become available as Release 1. The previously announced availability date was June 26, 1992.

Any drivers affected by these changes in dates will have the same first customer shipment dates as their corresponding environments. All drivers are listed and described in Programming Announcement 291-498, dated September 11, 1991.

**Features:** The first customer shipment date of the EDA/SQL Server Release 2 for MVS/ESA Exploitation is June 26, 1992. This feature offers enhancements that exploit MVS/ESA more efficiently.

*This announcement is provided for your information only. IBM's products can only be ordered under the terms and conditions of IBM's applicable agreements. For more information, contact your IBM representative.*

The EDA/SQL Server Release 2 for MVS/ESA Exploitation feature utilizes the capabilities of the ES/3090™ Model S and above with MOVE-PAGE and the ES/9000™ processors, along with the MVS/ESA 3.1.3 and above operating system. In Release 2, the EDA/SQL Server for MVS/ESA Exploitation feature will use data spaces and hiperspaces for buffering, file storage and sorting, and enhancing performance of EDA/SQL in the ESA environment.

The first customer shipment date for the EDA/Smartmode options for MVS and VM is also June 26, 1992. EDA/Smartmode is an intelligent query analyzer/governor that utilizes an embedded expert system engine to predict the resource utilization of requests sent to an EDA/SQL server. EDA/Smartmode utilizes a data collection facility to capture statistics on how user requests are processed against heterogeneous data sources. EDA/Smartmode builds and stores execution rules in its knowledge base.

Once the execution rules are built, the Systems Administrator Facility of EDA/Smartmode can be used to build rules about resource utilization. For example, rules can be built to see how much CPU time a specific user or application can use, or to define resource limits meaningful to a specific environment. At execution, Smartmode's run-time facility interrogates the query against the rules for a given application, predicts the resource utilization and confidence factor, and accepts or rejects the query based on its determination.

**Withdrawal/Replacement of Previously Announced Products:** The EDA/SQL Remote Subserver for HP MPE (5758-IPL) and the API/SQL Client Environment for HP MPE (5758-IQZ) have been withdrawn effective immediately. In their place, IBI will offer the EDA/SQL Remote Subserver for HP-UX Release 1.1 and the API/SQL Client Environment for HP-UX Release 1.1. The first customer shipment date for these products is June 26, 1992. The four drivers announced September 11, 1991, for the HP MPE environment will be available under the HP-UX environment. All drivers are listed in Programming Announcement 291-498, dated September 11, 1991.

**EDA/SQL Product Family:** The EDA/SQL product family consists of four logical components that complement each other in addressing the business requirements of a customer's enterprise information system.

EDA/SQL Server Environment manages the data flow and translation of structured query language (SQL) commands into the appropriate commands of the target database management system. SQL-addressed to SQL-compliant database management systems, such as DB2 and SQL/DS, can be passed through to the server environment unchanged.

API/SQL Client Environment defines a common interface designed to enable application programs to access both relational and non-relational database management systems. The client environment consists of some calling sequences and some data structure definitions.

EDA/Extender<sup>1</sup> products enable decision support systems that currently access DB2 and SQL/DS to transparently request data through the EDA application programming interface.

EDA/LINK<sup>1</sup> communications products provide interfaces to a variety of communications protocols for remote data access.

Refer to Programming Announcement 291-498, dated September 11, 1991, for additional information on the EDA/SQL structure and specific products.

<sup>TM</sup> Trademark of International Business Machines Corporation.

<sup>1</sup> Trademark of Information Builders, Inc.

**Features of EDA/SQL Server Release 2 Environment:** IBM will market Release 2 of the EDA/SQL Server Environment, providing advanced functions for the MVS and VM environments.

The EDA/SQL Release 2 advanced function servers incorporate enhancements to the SQL translator to extend the range of relational applications that can utilize EDA/SQL to access non-relational data. New EDA/SQL server environment features include:

- The ability to support both remote request and remote unit of work against heterogeneous data sources
- Enhancements in EDA/SQL's data transfer capabilities between processors
- Enhancements to exploit MVS/ESA more efficiently
- A reduced server working set capable of supporting significantly more users in a single server address space
- EDA/Smartmode, an intelligent query analyzer that utilizes an embedded expert system to govern the execution of SQL requests against relational and non-relational data.

EDA/SQL Release 2 also provides improved database administration facilities, which include utilities for the automated population of the EDA/SQL catalog from any COBOL data definitions, DB2 catalog, or IDMS/R<sup>3</sup> and ADABAS<sup>4</sup> data dictionaries.

EDA/SQL Release 2 Servers provide double byte character support (DBCS) for Levels 1 and 2, and also support the EDA/Link communications products as well as the EDA/Dynamic Extenders. Refer to Programming Announcement 291-498, dated September 11, 1991, for details.

The EDA/SQL Server environment also provides data drivers. These are database interfaces to specific IBM and non-IBM databases and files. The data drivers accept data requests from the EDA/SQL server, process the requests against the target database or file, and receive the answer back from the target database or file. The data drivers are designed to take advantage of any security and optimization features that their database offers. The data drivers support read and write capabilities to their target database or file (unless noted as read only). For a complete list of the data drivers available, refer to Programming Announcement 291-498, dated September 11, 1991.

Setup and maintenance of the EDA/SQL Server environment are accomplished using a set of application programs and utilities that assist the database administrator in managing the EDA/SQL data environment.

In today's environment for client/server applications within an open systems platform, extensions of EDA/SQL to the UNIX<sup>5</sup> environment are enhanced with the addition of EDA/SQL for the HP-UX environment. The EDA/SQL HP-UX Server allows customers access to Hewlett-Packard data in the UNIX environment. The EDA/SQL HP-UX Server utilizes the HP/9000 300 series processors and supports an EDA/Link TCP/IP protocol to the MVS server environments.

<sup>3</sup> Trademark or registered trademark of Computer Associates, Inc.

<sup>4</sup> Trademark or registered trademark of Software AG, Incorporated.

<sup>5</sup> Trademark of UNIX Systems Laboratories, Inc.

**Features of EDA/Extenders Release 2:** IBM will market Release 2 of the EDA/Dynamic Extenders for the MVS and VM environments.

EDA/Extender products are a compatible subset of the Systems Application Architecture® (SAA™) SQL common programming interface (CPI) only, and do not support all CPI functions. An IBI marketing representative can provide further information. EDA/Extender products enhance and complement the existing functions provided by decision support systems.

EDA/Extenders are also provided through the EDA/DataLens<sup>6</sup> Driver for Lotus 1-2-3<sup>6</sup> that operates in the DOS, DOS Windows<sup>7</sup> and OS/2® environments, and the Hypercard<sup>8</sup> environment for Macintosh<sup>8</sup>.

Release 2 of the EDA/Dynamic Extenders for DB2 and for SQL/DS supports advanced SQL functions, such as prompted query and the use of parameterized SQL within the EDA/SQL Server environment.

Today, a great number of decision support systems access DB2 or SQL/DS relational databases. The two EDA/Extender products allow these applications to access non-relational databases and files. The EDA/Dynamic Extenders for IBM's DB2 and SQL/DS offer applications ANSI Level 1 read-only access to non-relational and relational data through the existing DB2 or SQL/DS interface. They provide catalog services to the application by allowing the application to query DB2-type tables to retrieve information about the EDA/SQL environment relevant to the application. The EDA/Dynamic Extender and the EDA/SQL Server environment can process SQL requests and return information to the requesting application. In the case of errors, DB2 error codes and diagnostic messages are returned to the application.

The EDA/Dynamic Extender for SQL/DS provides the same functions and services for the VM/XA™ and VM/ESA environments as the EDA/Dynamic Extender for DB2 does for the MVS environment.

These extenders allow currently existing enterprise decision support systems to remain consistent in the way they manipulate their business information, yet expand their informational resources to a more comprehensive set of enterprise data sources.

® Registered trademark of International Business Machines Corporation.

™ Trademark of International Business Machines Corporation.

<sup>6</sup> Trademark or registered trademark of Lotus Development Corporation.

<sup>7</sup> Trademark or registered trademark of Microsoft Corporation.

<sup>8</sup> Trademark or registered trademark of Apple Computers, Inc.

## Technical Information

Technical information, including machine requirements, programming requirements, program support and packaging, remains the same as announced on September 11, 1991, in Programming Announcement 291-498, with the exception of the machine and programming requirements for the EDA/SQL Server Release 2 for MVS/ESA Exploitation. Release 2 does not support the ES/3090 Model J. Release 2 does support the ES/3090 Model S and above with MOVE-PAGE, and the ES/9000. In addition Release 2 requires that MVS/ESA be at Version 3 Release 1.3 or above.

Machine and programming requirements for the EDA/Smartmode options match those of their corresponding EDA/SQL Server environments (MVS or VM). Machine and programming requirements for the EDA/SQL Remote Subserver for HP-UX and the API/SQL

Client Environment for HP-UX must be sufficient to support HP-UX Release 1.1, or higher.

## Ordering Information

Orders for new licenses will be accepted now and scheduled for shipment by the program supplier beginning with the availability dates shown in the product description section.

To order a basic license, specify the program number, quantity, feature number 9080 for asset registration, one-time charge feature number and the desired distribution media feature number.

Release 2 products have the same product numbers, feature numbers and distribution media numbers as the corresponding Release 1 products. Refer to Programming Announcement 291-498, dated September 11, 1991, for this information and also for additional information on ordering IBI products and IBI's system of classifying and pricing of products by tiers and users. A sample configuration is given in Programming Announcement 291-498.

The information shown below is for the EDA/Smartmode options and the HP-UX Server and Client.

Tier groups are based on IBM machine groups.

- Tier 1 — up to IBM Machine Group 31
- Tier 2 — up to IBM Machine Group 40
- Tier 3 — up to IBM Machine Group 80.

User groups are based on the number of user IDs.

- User 1 — up to 16 user IDs
- User 2 — up to 48 user IDs
- User 3 — unlimited number of user IDs.

Program Number/Name	One-Time Charge Feature Numbers		
	Tier		
	1	2	3
5758-IES <b>EDA/Smartmode Option for MVS/XA and MVS/ESA</b>	2695	2696	2697
5758-IET <b>EDA/Smartmode Option for VM/SP and VM/ESA</b>	2698	2699	2700
User			
5758-IEU <b>EDA/SQL Remote Subserver for HP-UX 1.1</b>	2701	2702	2703
5758-IEV <b>API/SQL Client Environment for HP-UX 1.1</b>	N/A*	N/A*	N/A*

\* Feature numbers are not assigned to products that have no charge.

The EDA/Smartmode options have the same media feature numbers as their corresponding server environments for MVS and VM. The media feature numbers for the HP-UX environment are: 5803 (9/6250 Magnetic Tape) and 5806 (3480 Tape Cartridge).

## General Information

The employees of IBM and the program supplier can only act on behalf of their employers, and are not to be considered the agents or employees of the other party. IBM has only been authorized by the program supplier to present marketing material and to receive orders for the programs offered under the IBM Cooperative Software Program.

The information in this document concerning non-IBM products was obtained from the suppliers of those products or from their published announcements. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to the non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the supplier of those products.

## Terms and Conditions

**Licensing:** Programs presented under the IBM Cooperative Software Program are available as distributed from the program supplier. Terms and conditions are as provided by the program supplier.

**Program Services:** Program service, if any, is as provided by the program supplier.

**Testing Period:** The testing period, if any, is as provided by the program supplier.

**DISCLAIMER OF WARRANTY:** Not warranted by IBM. Warranty, if any, is as provided by the program supplier. IBM makes no warranties, express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Address any questions pertaining to warranty coverage to the program supplier.

## Charges

Charges listed for programs offered under the IBM Cooperative Software Programs are as provided by the program supplier and are for reference only. Charges are subject to change without notice. Discounts, allowances and/or additional product licensing options, if any, are as provided by the program supplier. Current charges are available from the program supplier or in the price list included in the program supplier's marketing package.

All charges remain the same as announced on September 11, 1991, in Programming Announcement 291-498. IBI will offer Release 2 products at the same price as the initial release of EDA/SQL, although pricing remains at the discretion of the vendor. When EDA/SQL Release 2 products become available, customers can upgrade their current software at no charge. An IBI marketing representative can provide further information.

Charges for the EDA/Smartmode options and the HP-UX Server and Client are shown below. Tier groups are based on IBM machine groups. User groups are based on the number of user IDs.

- Tier 1 — up to IBM Machine Group 31
- Tier 2 — up to IBM Machine Group 40
- Tier 3 — up to IBM Machine Group 80.

User groups are based on the number of user IDs.

- User 1 — up to 16 user IDs
- User 2 — up to 48 user IDs
- User 3 — unlimited number of user IDs.

## Program Number/Name

## One-Time Charge

### Tier

1      2      3

5758-IES	<b>EDA/Smartmode</b> Option for MVS/XA and MVS/ESA	\$24,000	28,800	39,600
5758-IET	<b>EDA/Smartmode</b> Option for VM/SP and VM/VSA	24,000	28,800	39,600
<b>User</b>				
5758-IEU	<b>EDA/SQL Remote</b> Subserver for HP-UX	32,000	48,000	63,000
5758-IEV	<b>API/SQL Client</b> Environment for HP-UX	N/C	N/C	N/C

# Programming Announcement



IBM United States

March 24, 1992

## Cooperative Software: IBI Products – Revised Information and Availability

The products in this announcement are available as a part of the IBM Cooperative Software Program. Product information has been provided by the program supplier, Information Builders, Inc. (IBI), a member of the IBM International Alliance for the Information Warehouse™ framework. IBI is solely responsible for the product information contained in this announcement.

This announcement describes new features available in Release 2 of selected products from the Enterprise Data Access/SQL<sup>1</sup> (EDA/SQL<sup>1</sup>) product family for MVS and VM announced on September 11, 1991. In addition, changes in availability dates are announced along with a product withdrawal and replacement.

For additional information on the products of Information Builders, Inc., refer to Programming Announcement 291-498, dated September 11, 1991. For additional information on the Information Warehouse framework, refer to Programming Announcement 291-471, dated September 11, 1991.

**Withdrawal from Marketing:** The following products are withdrawn, effective immediately:

5758-IPL **EDA/SQL Remote Subserver for HP<sup>2</sup> MPE<sup>2</sup>**  
5758-IQZ **API/SQL<sup>1</sup> Client Environment for HP MPE**

**Planned Availability Dates:** Refer to the Description section of the customer announcement.

<sup>TM</sup> Trademark of International Business Machines Corporation.

<sup>1</sup> Trademark of Information Builders, Inc.

<sup>2</sup> Trademark or registered trademark of Hewlett-Packard, Inc.

### Description

#### Program Numbers and Names

5758-IPB	<b>EDA/SQL Server Release 2</b> for MVS/XA™ and MVS/ESA™
5758-IPF	<b>EDA/SQL Server Release 2</b> for MVS/ESA Exploitation
5758-IES	<b>EDA/Smartmode<sup>1</sup> Option</b> for MVS/XA and MVS/ESA
5758-IRV	<b>API/SQL<sup>1</sup> Client Environment</b> Release 2 for MVS/XA and MVS/ESA
5758-IPD	<b>EDA/SQL Server Release 2</b> for VM/SP and VM/ESA™
5758-IET	<b>EDA/Smartmode Option</b> for VM/SP and VM/ESA
5758-IRX	<b>API/SQL Client Environment</b> Release 2 for VM/ESA

5758-IEU	<b>EDA/SQL Remote Subserver Release 1.1</b> for HP-UX <sup>2</sup>
5758-IEV	<b>API/SQL Client Environment</b> Release 1.1 for HP-UX
5758-ITF	<b>EDA/Dynamic Extender<sup>1</sup> Release 2</b> for DB2®
5758-ITG	<b>EDA/Dynamic Extender Release 2</b> for SQL/DS™
5758-IPG	<b>EDA/SQL Server Extension Release 1</b> for VSE/ESA™

<sup>TM</sup> Trademark of International Business Machines Corporation.

<sup>1</sup> Trademark of Information Builders, Inc.

<sup>2</sup> Trademark or registered trademark of Hewlett-Packard, Inc.

® Registered trademark of International Business Machines Corporation.

#### Release 2 Availability Information

The first customer shipment date for the EDA/SQL Server Release 2 for MVS, the API/SQL Client Environment Release 2 for MVS, and the EDA/Dynamic Extender Release 2 for DB2 is June 26, 1992.

The data drivers for MVS announced on September 11, 1991, will work with both Release 1 or Release 2 of the EDA/SQL Server. All drivers are listed and described in Programming Announcement 291-498, dated September 11, 1991.

**Changes in Previously Announced Availability Dates:** The first customer shipment date for the EDA/SQL Server for VM, the API/SQL Client Environment for VM, and the EDA/Dynamic Extender for SQL/DS is June 26, 1992. At that time these products will become available as EDA/SQL Server Release 2 for VM, API/SQL Client Environment Release 2 for VM, and EDA/Dynamic Extender Release 2 for SQL/DS. The previously announced availability date was March 27, 1992.

The first customer shipment date for the EDA/SQL Server Extension for VSE/ESA (5758-IPG) is August 28, 1992, at which time the product will become available as Release 1. The previously announced availability date was June 26, 1992.

Any drivers affected by these changes in dates will have the same first customer shipment dates as their corresponding environments. All drivers are listed and described in Programming Announcement 291-498, dated September 11, 1991.

**Features:** The first customer shipment date of the EDA/SQL Server Release 2 for MVS/ESA Exploitation is June 26, 1992. This feature offers enhancements that exploit MVS/ESA more efficiently.

*This announcement is provided for your information only. IBM's products can only be ordered under the terms and conditions of IBM's applicable agreements. For more information, contact your IBM representative.*

The EDA/SQL Server Release 2 for MVS/ESA Exploitation feature utilizes the capabilities of the ES/3090™ Model S and above with MOVE-PAGE and the ES/9000™ processors, along with the MVS/ESA 3.1.3 and above operating system. In Release 2, the EDA/SQL Server for MVS/ESA Exploitation feature will use data spaces and hiperspaces for buffering, file storage and sorting, and enhancing performance of EDA/SQL in the ESA environment.

The first customer shipment date for the EDA/Smartmode options for MVS and VM is also June 26, 1992. EDA/Smartmode is an intelligent query analyzer/governor that utilizes an embedded expert system engine to predict the resource utilization of requests sent to an EDA/SQL server. EDA/Smartmode utilizes a data collection facility to capture statistics on how user requests are processed against heterogeneous data sources. EDA/Smartmode builds and stores execution rules in its knowledge base.

Once the execution rules are built, the Systems Administrator Facility of EDA/Smartmode can be used to build rules about resource utilization. For example, rules can be built to see how much CPU time a specific user or application can use, or to define resource limits meaningful to a specific environment. At execution, Smartmode's run-time facility interrogates the query against the rules for a given application, predicts the resource utilization and confidence factor, and accepts or rejects the query based on its determination.

**Withdrawal/Replacement of Previously Announced Products:** The EDA/SQL Remote Subserver for HP MPE (5758-IPL) and the API/SQL Client Environment for HP MPE (5758-IQZ) have been withdrawn effective immediately. In their place, IBI will offer the EDA/SQL Remote Subserver for HP-UX Release 1.1 and the API/SQL Client Environment for HP-UX Release 1.1. The first customer shipment date for these products is June 26, 1992. The four drivers announced September 11, 1991, for the HP MPE environment will be available under the HP-UX environment. All drivers are listed in Programming Announcement 291-498, dated September 11, 1991.

**EDA/SQL Product Family:** The EDA/SQL product family consists of four logical components that complement each other in addressing the business requirements of a customer's enterprise information system.

EDA/SQL Server Environment manages the data flow and translation of structured query language (SQL) commands into the appropriate commands of the target database management system. SQL-addressed to SQL-compliant database management systems, such as DB2 and SQL/DS, can be passed through to the server environment unchanged.

API/SQL Client Environment defines a common interface designed to enable application programs to access both relational and non-relational database management systems. The client environment consists of some calling sequences and some data structure definitions.

EDA/Extender<sup>1</sup> products enable decision support systems that currently access DB2 and SQL/DS to transparently request data through the EDA application programming interface.

EDA/LINK<sup>1</sup> communications products provide interfaces to a variety of communications protocols for remote data access.

Refer to Programming Announcement 291-498, dated September 11, 1991, for additional information on the EDA/SQL structure and specific products.

<sup>TM</sup> Trademark of International Business Machines Corporation.

<sup>1</sup> Trademark of Information Builders, Inc.

**Features of EDA/SQL Server Release 2 Environment:** IBM will market Release 2 of the EDA/SQL Server Environment, providing advanced functions for the MVS and VM environments.

The EDA/SQL Release 2 advanced function servers incorporate enhancements to the SQL translator to extend the range of relational applications that can utilize EDA/SQL to access non-relational data. New EDA/SQL server environment features include:

- The ability to support both remote request and remote unit of work against heterogeneous data sources
- Enhancements in EDA/SQL's data transfer capabilities between processors
- Enhancements to exploit MVS/ESA more efficiently
- A reduced server working set capable of supporting significantly more users in a single server address space
- EDA/Smartmode, an intelligent query analyzer that utilizes an embedded expert system to govern the execution of SQL requests against relational and non-relational data.

EDA/SQL Release 2 also provides improved database administration facilities, which include utilities for the automated population of the EDA/SQL catalog from any COBOL data definitions, DB2 catalog, or IDMS/R<sup>3</sup> and ADABAS<sup>4</sup> data dictionaries.

EDA/SQL Release 2 Servers provide double byte character support (DBCS) for Levels 1 and 2, and also support the EDA/Link communications products as well as the EDA/Dynamic Extenders. Refer to Programming Announcement 291-498, dated September 11, 1991, for details.

The EDA/SQL Server environment also provides data drivers. These are database interfaces to specific IBM and non-IBM databases and files. The data drivers accept data requests from the EDA/SQL server, process the requests against the target database or file, and receive the answer back from the target database or file. The data drivers are designed to take advantage of any security and optimization features that their database offers. The data drivers support read and write capabilities to their target database or file (unless noted as read only). For a complete list of the data drivers available, refer to Programming Announcement 291-498, dated September 11, 1991.

Setup and maintenance of the EDA/SQL Server environment are accomplished using a set of application programs and utilities that assist the database administrator in managing the EDA/SQL data environment.

In today's environment for client/server applications within an open systems platform, extensions of EDA/SQL to the UNIX<sup>5</sup> environment are enhanced with the addition of EDA/SQL for the HP-UX environment. The EDA/SQL HP-UX Server allows customers access to Hewlett-Packard data in the UNIX environment. The EDA/SQL HP-UX Server utilizes the HP/9000 300 series processors and supports an EDA/Link TCP/IP protocol to the MVS server environments.

<sup>3</sup> Trademark or registered trademark of Computer Associates, Inc.

<sup>4</sup> Trademark or registered trademark of Software AG, Incorporated.

<sup>5</sup> Trademark of UNIX Systems Laboratories, Inc.

**Features of EDA/Extenders Release 2:** IBM will market Release 2 of the EDA/Dynamic Extenders for the MVS and VM environments.

EDA/Extender products are a compatible subset of the Systems Application Architecture® (SAA™) SQL common programming interface (CPI) only, and do not support all CPI functions. An IBI marketing representative can provide further information. EDA/Extender products enhance and complement the existing functions provided by decision support systems.

EDA/Extenders are also provided through the EDA/DataLens<sup>6</sup> Driver for Lotus 1-2-3<sup>6</sup> that operates in the DOS, DOS Windows<sup>7</sup> and OS/2® environments, and the Hypercard<sup>8</sup> environment for Macintosh<sup>8</sup>.

Release 2 of the EDA/Dynamic Extenders for DB2 and for SQL/DS supports advanced SQL functions, such as prompted query and the use of parameterized SQL within the EDA/SQL Server environment.

Today, a great number of decision support systems access DB2 or SQL/DS relational databases. The two EDA/Extender products allow these applications to access non-relational databases and files. The EDA/Dynamic Extenders for IBM's DB2 and SQL/DS offer applications ANSI Level 1 read-only access to non-relational and relational data through the existing DB2 or SQL/DS interface. They provide catalog services to the application by allowing the application to query DB2-type tables to retrieve information about the EDA/SQL environment relevant to the application. The EDA/Dynamic Extender and the EDA/SQL Server environment can process SQL requests and return information to the requesting application. In the case of errors, DB2 error codes and diagnostic messages are returned to the application.

The EDA/Dynamic Extender for SQL/DS provides the same functions and services for the VM/XA™ and VM/ESA environments as the EDA/Dynamic Extender for DB2 does for the MVS environment.

These extenders allow currently existing enterprise decision support systems to remain consistent in the way they manipulate their business information, yet expand their informational resources to a more comprehensive set of enterprise data sources.

® Registered trademark of International Business Machines Corporation.

™ Trademark of International Business Machines Corporation.

<sup>6</sup> Trademark or registered trademark of Lotus Development Corporation.

<sup>7</sup> Trademark or registered trademark of Microsoft Corporation.

<sup>8</sup> Trademark or registered trademark of Apple Computers, Inc.

## Technical Information

Technical information, including machine requirements, programming requirements, program support and packaging, remains the same as announced on September 11, 1991, in Programming Announcement 291-498, with the exception of the machine and programming requirements for the EDA/SQL Server Release 2 for MVS/ESA Exploitation. Release 2 does not support the ES/3090 Model J. Release 2 does support the ES/3090 Model S and above with MOVE-PAGE, and the ES/9000. In addition Release 2 requires that MVS/ESA be at Version 3 Release 1.3 or above.

Machine and programming requirements for the EDA/Smartmode options match those of their corresponding EDA/SQL Server environments (MVS or VM). Machine and programming requirements for the EDA/SQL Remote Subserver for HP-UX and the API/SQL

Client Environment for HP-UX must be sufficient to support HP-UX Release 1.1, or higher.

## Ordering Information

Orders for new licenses will be accepted now and scheduled for shipment by the program supplier beginning with the availability dates shown in the product description section.

To order a basic license, specify the program number, quantity, feature number 9080 for asset registration, one-time charge feature number and the desired distribution media feature number.

Release 2 products have the same product numbers, feature numbers and distribution media numbers as the corresponding Release 1 products. Refer to Programming Announcement 291-498, dated September 11, 1991, for this information and also for additional information on ordering IBI products and IBI's system of classifying and pricing of products by tiers and users. A sample configuration is given in Programming Announcement 291-498.

The information shown below is for the EDA/Smartmode options and the HP-UX Server and Client.

Tier groups are based on IBM machine groups.

- Tier 1 — up to IBM Machine Group 31
- Tier 2 — up to IBM Machine Group 40
- Tier 3 — up to IBM Machine Group 80.

User groups are based on the number of user IDs.

- User 1 — up to 16 user IDs
- User 2 — up to 48 user IDs
- User 3 — unlimited number of user IDs.

Program Number/Name	One-Time Charge Feature Numbers		
	Tier		
	1	2	3
5758-IES <b>EDA/Smartmode Option for MVS/XA and MVS/ESA</b>	2695	2696	2697
5758-IET <b>EDA/Smartmode Option for VM/SP and VM/ESA</b>	2698	2699	2700
User			
5758-IEU <b>EDA/SQL Remote Subserver for HP-UX 1.1</b>	2701	2702	2703
5758-IEV <b>API/SQL Client Environment for HP-UX 1.1</b>	N/A*	N/A*	N/A*

\* Feature numbers are not assigned to products that have no charge.

The EDA/Smartmode options have the same media feature numbers as their corresponding server environments for MVS and VM. The media feature numbers for the HP-UX environment are: 5803 (9/6250 Magnetic Tape) and 5806 (3480 Tape Cartridge).

## General Information

The employees of IBM and the program supplier can only act on behalf of their employers, and are not to be considered the agents or employees of the other party. IBM has only been authorized by the program supplier to present marketing material and to receive orders for the programs offered under the IBM Cooperative Software Program.

The information in this document concerning non-IBM products was obtained from the suppliers of those products or from their published announcements. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to the non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the supplier of those products.

## Terms and Conditions

**Licensing:** Programs presented under the IBM Cooperative Software Program are available as distributed from the program supplier. Terms and conditions are as provided by the program supplier.

**Program Services:** Program service, if any, is as provided by the program supplier.

**Testing Period:** The testing period, if any, is as provided by the program supplier.

**DISCLAIMER OF WARRANTY:** Not warranted by IBM. Warranty, if any, is as provided by the program supplier. IBM makes no warranties, express or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Address any questions pertaining to warranty coverage to the program supplier.

## Charges

Charges listed for programs offered under the IBM Cooperative Software Programs are as provided by the program supplier and are for reference only. Charges are subject to change without notice. Discounts, allowances and/or additional product licensing options, if any, are as provided by the program supplier. Current charges are available from the program supplier or in the price list included in the program supplier's marketing package.

All charges remain the same as announced on September 11, 1991, in Programming Announcement 291-498. IBI will offer Release 2 products at the same price as the initial release of EDA/SQL, although pricing remains at the discretion of the vendor. When EDA/SQL Release 2 products become available, customers can upgrade their current software at no charge. An IBI marketing representative can provide further information.

Charges for the EDA/Smartmode options and the HP-UX Server and Client are shown below. Tier groups are based on IBM machine groups. User groups are based on the number of user IDs.

- Tier 1 — up to IBM Machine Group 31
- Tier 2 — up to IBM Machine Group 40
- Tier 3 — up to IBM Machine Group 80.

User groups are based on the number of user IDs.

- User 1 — up to 16 user IDs
- User 2 — up to 48 user IDs
- User 3 — unlimited number of user IDs.

## Program Number/Name

## One-Time Charge

### Tier

1 2 3

5758-IES **EDA/Smartmode Option for MVS/XA and MVS/ESA** \$24,000 28,800 39,600

5758-IET **EDA/Smartmode Option for VM/SP and VM/VSA** 24,000 28,800 39,600

### User

1 2 3

5758-IEU **EDA/SQL Remote Subserver for HP-UX** 32,000 48,000 63,000

5758-IEV **API/SQL Client Environment for HP-UX** N/C N/C N/C